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A5R RBA
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(56) Documents cited
None

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(54) Dressing

(57) A dressing comprises a light-transmissive adhesive layer (3) and a light-transmissive, flexible plastics film (1), which film is laminated on one side to a non-woven fabric layer (2), wherein the non-woven fabric layer is provided with a pattern of protrusions (5) on one surface which allows part of the patterned non-woven fabric layer to be light-transmissive. The protrusions may be square, triangular, circular or oval in cross-sectional shape.

FIG. 1

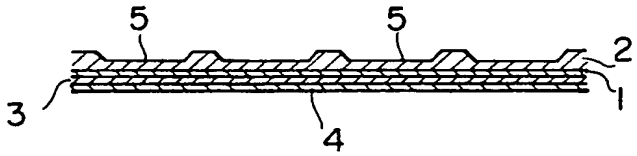


FIG. 3

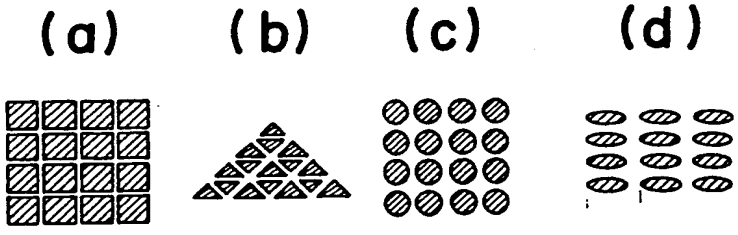
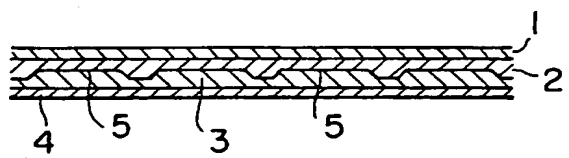


FIG. 2



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This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1990.

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FIG. 1

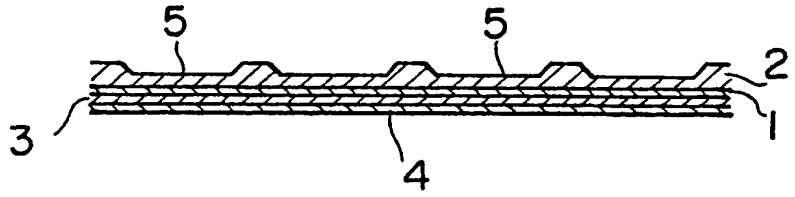


FIG. 2

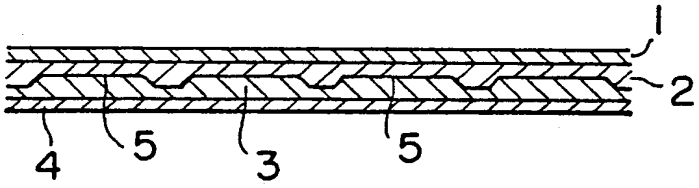


FIG. 3

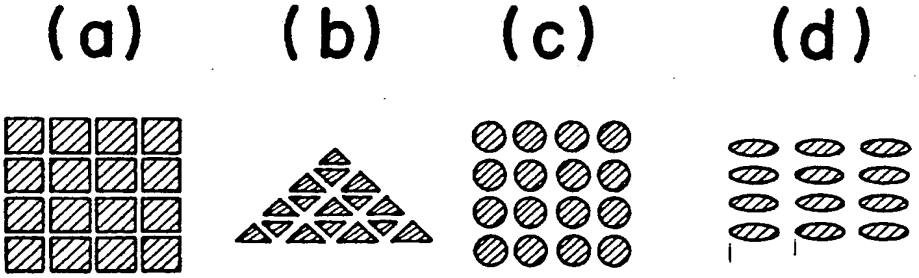
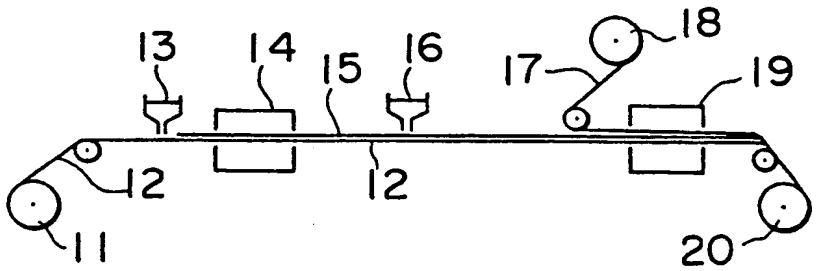
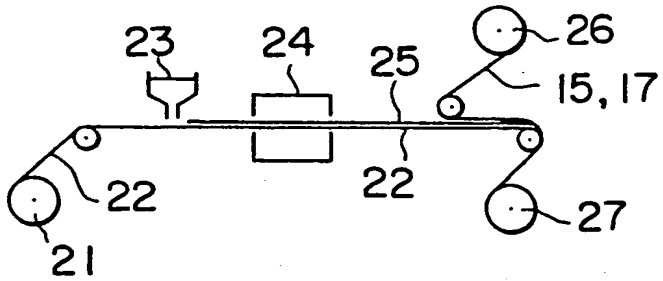


FIG. 4

(a)



(b)



TITLE OF THE INVENTION:

Dressing

The present invention relates to a dressing for medical treatment which is used in a state adhered to a skin for purposes such as the treatment of a wound caused on an animal or a human body or the fixation of a catheter, an injection needle, or a skin protective device. The dressing according to the present invention covers tape-shaped, long dressings, too.

In general, a dressing is required to have functions such as a strength sufficient to meet the purpose of

fixation, an air permeability sufficient to cope with the physiology of the skin, a sweatability, the ability to prevent the infiltration of water and germs from outside, a flexbility sufficient to allow the dréssing to follow the movement of the skin, easiness with which the dressing can be mounted or put on, the ability to optionally select portions to which the dressing is applied, etc.

As a conventional dressing of this type, there is known a dressing constructed in such a manner that a pressure sensitive adhesive is applied onto a thin urethane film about 30 μm in thickness (Patent Publication No.(Sho) 55-14108). This conventional dressing is used in such a manner that the release paper placed on the pressure-sensitive adhesive is removed, and the plastics film is put on a skin, for instance, a wound, so that the dressing is securely adhered by means of the pressure-sensitive adhesive. However, in case of this type of dressing, the plastics film is very thin and highly flexible and thus weak-stiffness or lacks firmness, so that the dressingis very hard to handle after the release paper is removed; and the film tends to be stretched and wrinkled or curled, so that portions of the film are apt to stick to each other. Thus, a high-level skill is required to mount the dressing in a state closely attached to the skin. In order to make an improvement in this respect, there has been proposed a dressing constructed in such a manner that a frame body with a central hole, that is, a so-called window frame is attached to the perphery at the side, of the plastics film, opposite with respect to its side adjacent the pressure-sensitive adhesive (Patent Laid-Open No.(Sho) 57-115480). This dressing is mounted in such a manner that, after the releas paper is removed, the film is put on the skin surface by use of the window frame, and

then, the film is fixed to the pred termined portion of the skin under removal of the frame from the film.

In case of this dressing, however, the operability or maneuverability is considerably improved as compared with the conventional dressings, but the problem - that, when the release paper is removed from the film, likewise, the film is stretched, and since the frame is hard, this dressing is not suited at all for application to, particulary, curved portions of a human body and, in addition, it is hard to be applied even to a flat portion-still remains unsolved.

In order to make an improvement in this respect, a dressing constructed in such a manner that a plastics film and a nonwoven fabric are laminated, and an adhesive layer is provided on the whole surface at the side, of the plastic film, opposite with respect to its side adjacent the nonwoven fabric, has been proposed by the present applicant (Utility Model Laid-Open No.(Sho) 63-120620). This dressing is very good in operability or maneuverability, and the film, even if it is very thin, can be applied onto a wound in a closely attached state. However, due to the use of a nonwoven fabric, the dressing lacks transparency, so that it is not possible for the user to apply the dressing to the optimum position by seeing the wound through the dressing, to observe the wound after the dressing is mounted, or to wipe off a filth when such a filth is attached to the surface of the nonwoven fabric. This is another serious problem.

Morevoer, there is proposed a further dressing which is constituted in such a manner that a plastics film and a nonwoven fabric are laminated, and an adhesive layer is provided on the surface at the side, of the nonwoven fabric,

opposite with respect to its side adjacent the plastics film (Utility Model Publication No.(Sho) 63-44032). In case of this dressing, the penetration of water and germs from the outer surface thereof is avoided, but, since the nonwoven fabric present between the plastics film and the adhesive layer is exposed around the periphery of the dressing, it tends to happen that when, the dressing gets into contact with water, the water infiltrates to the wound from the exposed portion of the nonwoven fabric by the water absorption phenomenon or capillarity thereof, so that perfect water resisting and antibacterial functions cannot be fulfilled; and, in extreme cases, the adhesive layer is separated from the nonwoven fabric, or the nonwoven fabric is separated from the plastics film. This is quite a shortcoming.

It is the object of the present invention to provide a dressing which is excellent in operability or maneuverability and allows a person to see, through the dressing, the surface onto which the dressing is to be applied.

Another object of the present invention is to provide a dressing which is excellent in operability or maneuverability, an excellent surface filth wiping-off ability, and allows a person to see, through the dressing, the surface onto which the dressing is to be put.

In order to achieve the above-mentioned object, according to the present invention, the dressing is constructed in such a manner that a nonwoven fabric and a

light-transmissive, flexible plastics film are laminated, at least the nonwoven fabric is embossed, and a light-transmissive adhesive layer is provided on the whole surface at the side, of the plastics film opposite with respect to its side adjacent the nonwoven fabric.

Furthermore, in order to achieve the above-mentioned another object, according to the present invention, the dressing is constructed in such a manner that a nonwoven fabric and a light-transmissive, flexible plastics film are laminated, at least the nonwoven fabric is embossed, and a light-transmissive adhesive layer is applied onto the whole surface at the side, of the nonwoven fabric, opposite with respect its side adjacent the plastics film.

According to the the present invention, the nonwoven fabric is flexible and deformable in multi-directions and thus does not restrain the movement of the skin; and said nonwoven fabric is embossed, so that the thus embossed portions of the nonwoven fabric become light-transmissive, while the flexible plastics film is retained in shape and supported by non-embossed portions. The dressing is used in such a manner that the plastics film is direcly mounted or put on the surface to which the dressing is to be applied and then adhered to the desired position by means of the adhesive layer under the user's observation of the above-mentioned surface, whereby the dressing is mounted. Even after the mounting of the dressing is over, the user can observe the skin surface in this state through the nonwoven fabric and the plastics film.

Further, according to the present invention, the

nonwoven fabric is embossed, so that the thus embossed protions of said nonwoven fabric become light-transmissive, and moreover, the anchor effect of the adhesive is improved, the flexible plastics film is shape-retainingly supported by the non-embossed portions of the nonwoven fabric. The dressing thus constituted according to the preosent invention is used in such a manner that the nonwoven fabric is put on the surface to which the dressing is to be applied, and the nonwoven fabric is adhered to the desired position by means of the adhesive layer under the user's own observation of said surface, with which the mounting of the dressing is completed. Even after the mounting of the dressing is over, the user can see, in this state, the skin surface through the plastics film and the nonwoven fabric.

The nonwoven fabric is flexible and deformable in multi-directions and thus closely attaches to the skin surface together with the flexible plastics film without restraining the movement of the skin.

Moreover, since the plastics film constitutes the surface, a filth which attaches thereto can be easily wiped off, and since the nonwoven fabric is partially compressed by embossing, no capillarity is allowed to occur, so that the infiltration of water, germs, etc. from the side faces is prevented.

Embodiments of the present invention will now be descr.ibed with reference to the drawings.

Fig.1 is a sectional view of a dressing according to the present invention, wherein numeral 1 denotes a plastics

film, numeral 2 denotes a nonwoven fabric laminated to one side surface of the plastics film 1, numeral 3 denotes an adhesive layer applied to the whole surface at the side, of the plastics film 1, opposite with respect to its side laminated with the nonwoven fabric 2, and numeral 4 denotes a released paper placed on the adhesive layer 3. The nonwoven fabric 2 is embossed in portions 5 thereof in accordance with a predetermined pattern; and the thus embossed portions 5 become transparent.

Fig.2 is a sectional view of a dressing according to the present invention, wherein numeral 1 denotes a plastics film, numeral 2 denotes a nonwoven fabric laminated to one side surface of the plastics film 1, numeral 3 denotes an adhesive layer applied to the whole surface at the side, of the nonwoven fabric 2, opposite to its side laminated to the plastics film 1, and numeral 4 denotes a released paper placed on the surface of the adhesive layer 3. Portions 5 of the nonwoven fabric 2 are embossed at its side adjacent the adhesive layer 3; and the thus embossed portions 5 turn transparent.

As the plastics film 1, a urethane film, a fluoroplastics film, polyethylene film, a ethylene-vinyl acetate copolyer, etc. can be used; the thickness of the plastics film 1 is in a range of 1 to 60 μm, preferably 5 to 30 μm, and more preferably 10 to 20 μm; and, as for the modulus, the 100% modulus is 10 to 100 kg/cm^2, preferably 15 to 50 kg/cm^2, and more preferably 20 to 30 kg/cm^2. The characteristics specially required of the plastics film 1 are low modulus, high stretchability, and high transparency.

As for materials for the nonwoven fabric 2, materials

comprising thermoplastic r sins such as polyurethane resin, polyester resin, acrylic resin, polyamide resin, styrene-isoprenestyrene resin can be used. Particularly, nonwoven fabrics comprising polyurethane resin or styrene-isoprene-styrene resin are excellent in flexibility, stretchability and water replellency. The thickness of the nonwoven fabric is in a range of 0.1 to 0.8 mm, preferably 0.2 to 0.5 mm; the METSUKE or weight per unit area is 10 to 100 g/m^2, preferably 20 to 75 g/m^2, and more preferably 30 to 60 g/m^2. The modulus is preferably the same as or smaller than that of the plastics film 1. As for the embossing of the nonwoven fabric, the emboss area percentage (emboss percentage) is 20 to 70%, preferably 25 to 50%, and the emboss number is desirably 10 or more per cm^2. The smaller the emboss area percentage is, the higher the firmness of the nonwoven fabric becomes, but the transparency decreases. As the emboss area percentage is increcased, the firmness decreases, but the transparency increases. If the emboss area percentage is lower than 20%, the transparency is too low, so that the observation of the skin surface becomes difficult. If the emboss percentage is higher than 70%, the nonwoven fabric becomes weak-stiffness or lacks firmness, so that it becomes difficult to support the plastics film to a sufficient degree for retention of its shape, thus lowering the operability or maneuverability. Thus, the characteristics particularly required of the nonwoven fabric are such as do not mar the stretchability of the plastics film and yet assure an appropriate firmness and high transparency (of the nonwoven fabric).

As the embossing pattern, an optional one can be used. Fig.3 shows examples thereof, of which (a) shows a square patern, (b) shows a triangular pattern, (c) shows a circular

pattern, and (d) shows an oval pattern.

As the material of the adhesive layer 3, acrylic ester block (graft) copolymer is particularly suited, but polyether ester block copolymer, etc. can also be used. The necessary condition required of the adhesive layer 3 is good light transmission properties.

The lamination of the plastics film 1 and the nonwoven fabric 2 is carried out by the following method for example:

As shown in Fig.4(a), a urethane solution 13 prepared by dissolving a urethane resin into a solvent is applied onto a released paper 12 drawn out from a roll 11. Then, the thus treated released paper 12 is led into a drying device 14 for drying thereof, whereby a urethane film 15 is formed on the released paper 12. Then, as an adhesive, a urethane series adhesive 16 is applied to the urethane film 15, while on the other hand, a urethane nonwoven fabric 17 which has been embossed by use of a heated roll having a predetermined pattern is drawn out from a roll 18 and lapped over the urethane series adhesive 16; and the thus bonded film and fabric are then led into a drying device 19 for drying thereof and then reeled up into a roll 20.

Next, as shown in Fig.4b, an adhesive 23 is applied onto a released paper 22 drawn out from a roll 21. Then the thus treated released paper 22 is dried by a drying device 24, whereby an adhesive layer 25 is formed on the released paper 22. From a roll 26 formed by removing the released paper 12 from the laminate consisting of the urethane film 15 and the embossed nonwoven fabric 17 of the roll 20 shown in Fig.4a, the laminate consisting of the urethane film 15

and the nonwoven fabric 17 is drawn out and lapped over the released paper 22 in such a manner that the urethane film (15) side or the nonwoven fabric (17) side faces the adhesive layer 25. Then the laminate thus lapped over the released paper 22 is reeled up into a roll 27, whereby a rolled dressing is formed.

The dressing thus made is cut to a predetermined size and enclosed into sterilized bags. If required, a pad can be provided on the pressure-sensitive adhesive surface at the plastics film side or the nonwoven fabric side of the dressing. Moreover, depending on its use, the dressing can also be formed into a tape roll of a suitable length.

The dressing according to the present invention is mounted or put on in such a manner that the released paper 4 (Fig.1 and Fig.2) is removed to expose the surface of the adhesive layer 3, and then the dressing is stuck to a predetermined portion of the skin surface, for instance a wound surface under (the user's) observation of the wound surface through the plastics film 1 and the nonwoven fabric 2. In this case, since the plastics film 1 is very thin and flexible, but it is laminated to the nonwoven fabric 2, so that, even after the released paper 4 is removed from the plastics film 1, the plastics film 1 is never stretched or wrinkled, and moreover, the user can directly see the skin surface through the plastics film 1 and the nonwoven fabric 2; and thus, the user can very easily apply the dressing onto the skin surface.

In the above-described embodiment, only the nonwoven fabric is embossed; and the plastics film and the thus previously embossed nonwoven fabric are laminated, but it is

alternatively possible to manufacture the dressing in such a manner that, after the nonwoven fabric which has not been embossed and the plastics film are laminated, both of the nonwoven fabric and the plastics film are embossed.

Moreover, in the case of the dressing shown in Fig.1, it is also possible to manufacture the dressing in such a manner that, after the nonwoven fabric is laminated with the plastics film, the surface of said nonwoven fabric is subjected to water repellent treatment by use of silicone resin, fluoroplastics or the like as required.

Concrete examples of the dressing according to the present invention will now be described.

Concrete Example 1

A dressing was manufactured as follows: As the flexible plastics film, a urethane film having a thickness of 10 μm was used, and, as the nonwoven fabric, there was used a nonwoven fabric which was made of 100% of urethane by the meltblown method and had a METSUKE or weight-per-unit-area of 50 g/m^2 (such as for instance "Espansione" (trade name) manufactured by Kanebo, Ltd.), wherein said nonwoven fabric was embossed with the emboss number of 50 per cm^2 and the emboss area percentage of 31%. The plastics film and the nonwoven fabric were laminated by use of a urethane adhesive, and the surface of the nonwoven fabric was subjected to water repellant treatment by use of a fluoroplastics, and a polyacrylic ester adhesive was applied onto the surface of the plastics film at the rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried). The thickness of the thus manufactured dressing was 210 μm, the METSUKE or weight per unit area was 100 g/m^2,

the moistur permeability was 790 g/m^2 or higher (measur d by JIS.Z.0208), the water pressure resistance was 1000 mmH$_2$O or higher (measured by JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, and the operability or maneuverability was good. Thus, excellent characteristics were exhibited as a dressing.

Concrete Example 2

A dressing was manufactured as follows: As the flexible plasltics film, a urethane film having a thicknes of 20 μm was used, and, as the nonwoven fabric, there was used a nonwoven fabric which was made, by the meltblown method, of a mixed resin consisting of 90% of SIS block polymer and 10% of polypropylene and had a Metsuke or weight-per-unit-area of 40 g/m^2 (such as for instance "Septon" (trade name) manufactured by Kuraray Co., Ltd.), wherein said nonwoven fabric was previously embossed into an oval emboss area percentage of 38%. The plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive, the surface of the nonwoven fabric was subjected to water repellent treatment by use of a fluoroplastics, while, onto the surface of the plastic film, a polyacryic ester adhesive was applied at the rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. The overall thickness of this dressing was 420 μm, the METSUKE or weight per unit area was 103 g/m^2, the moisture permeability was 830 g/m^2 or higher (measured by JIS.Z.0208), the water pressure resistance was 1000 mmH$_2$O or higher (JIS.L.1096 low pressure test), thewater repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, and the operability or maneuverability was good; thus, excellent

characteristics were exhibited as a dressing.

Concrete Example 3

A dressing was manufactured as follows: As the flexibl plastics film, a urethane film having a thickness of 10 μm was used, while, as the nonwoven fabric, there was used a nonwoven fabric which was made, by the meltblown method, from 100% of urethane and had a METSUKE or weight-per-unit area of 50 g/m^2 (such as for instance "Espasione" (trade name) manufactured by Kanebo, Ltd.), The plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive and embossed into a square pattern with the emboss number of 50 per cm^2 and the emboss area percentage of 31%, and the surface of the nonwoven fabric was subjected to water repellent treatment by use of a silicone resin, while, onto the surface of the plastics film, a polyacrylic ester series adhesive was applied at a rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. The overall thickness of this dressing was 210 μm, the METSUKE or weight per unit area was 100 g/m^2. The moisture permeability was 800 g/m^2 or higher (measured by JIS.Z.0208), the water pressure resistance was 1000 mmH_2O or higher (measured by JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, and the operability or maneuverability was good. Thus, excellent characteristics were exhibited as a dressing.

Concrete Example 4

A dressing was manufactured as follows: As the flexible plastics film, a urethane film having a thickness of 10 μm was used, while, as the nonwoven fabric, there was used a

nonwoven fabric which was made, by the meltblown method, from 100% of urethane and had a METSUKE or weight-per-unit-area of 50 g/m^2 (such as for instance "Espanisione" (trade name) manufactured by Kanebo, Ltd.), wherein said nonwoven fabric was previously embossed into a square emboss pattern with the emboss number of 50 per cm^2 and the emboss area percentage of 31%. The plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive, and, onto the surface of the nonwoven fabric, a polyacrylic ester adhesive was applied at the rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. The overall thickness of this dressing was 210 μm, the METSUKE or weight per unit area was 100 g/cm^2, the moisture permeability was 790 g/m^2 or higher (measured by JIS.Z.0208), the water pressure resistance was 1000 mmH_2O or higher (measured by JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, the operability or maneuverability and the surface filth wiping-off ability were good. Thus, excellent characteristics were exhibited as a dressing.

Concrete Example 5

A dressing was manufactured as follows: As the flexbile plastics film, a urethane film having a thickness of 20 μm was used, while, as the nonwoven fabric, there was used a nonwoven fabric which was made, by the meltblown method, from 90% of SIS block polymer and 10% of polypropylene and had a METSUKE or weight-per-unit-area of 40 g/m^2 (such as for instance "Septon" (trade name) manufactured by Kuraray Co., Ltd.), wherein said nonwoven fabric was previously embossed into an oval emboss pattern with the emboss number f 40 per cm^2 and the emboss area percentage of 38%. The

plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive, and, onto the surface of the nonwoven fabric, a polyacrylic ester adhesive was applied at the rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. In case of this dressing, the overall thickness was 420 μm, the METSUKE or weight per unit area was 103 g/m^2, the water pressure resistance was 1000 mmH_2O or higher (measured by JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, the operability or maneuverability and the surface filth wiping-off ability were good, too. Thus, excellent characteristics were exhibited as a dressing.

Concrete Example 6

A dressing was manufactured as follows: As the flexibl plastics film, a urethane film having a thickness of 10 μm was used, while, as the nonwoven fabric, there was used a product which was made, by the meltblown method from 100% of urethane and had a METSUKE r weight-per-unit-area of 50 g/m^2 (such as for instance "Espansione" (trade name) manufactured by Kanebo, Ltd.). The plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive and embossed by use of a square emboss pattern in such a manner that the emboss number was 50 per cm^2 and the emboss area percentage was 31%. Onto the surface of the nonwoven fabric, a polyacrylic ester adhesive was applied at the rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. The overall thickness of this dressing was 210 μm, the METSUKE or weight-per-unit-area was 100 g/m^2, the mositure permeability was 800 g/m^2 or higher (measured by

JIS.Z.0208), the water pr ssure resistance was 1000 mmH_2O or higher (measured by JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was medium, and the operability or maneuverability and the surface filth wiping-off ability were good, too. Thus, excellent characteristics were exhibited as a dressing.

For comparison, examle of the dressings constituted according to conventional techniques will be set forth hereinbelow.

Comparative Example 1

A dressing was manufactured as follows: As the flexible plastics film, a urethane film having a thickness of 20 μm (such as for instance "Bion II" (trade name) imported by Toyo Cloth Co., Ltd.) was used, while, as the nonwoven fabric, there was used a product which was made, by the spun-lace method, from 100% of polyester and had a thickness of 230 μm and a METSUKE or weight-per-unit-area of 40 g/m^2 (such as for instance "Flexilon 140-072" (trade name) manufactured by VERATEC Japan Corp.). The plastics film and the nonwoven fabric mentioned above were laminated by use of a urethane adhesive, and the surface of the nonwoven fabric was subjected to water repellent treatment by use of a silicone resin, while, onto the surface of the plastics film, a polyacrylic ester adhesive was applied at a rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufacterd. The overall thickness of this dressing was 300 μm, the METSUKE or weight-per-unit-area was 72 g/m^2, the moisture permeability was 800 g/m^2 or higher (measured by JIS.Z.0208), the water pressure resistance was 1000 mmH_2O or

higher (JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the operability or maneuverability was good, but there was no transparency at all; and thus this dressing was not satisfactorily usable as such.

Comparative Example 2

A dressing was manufactured as follows: As the flexible plastics film, a urethane film having a thikness of 30 μm was used, and, onto one surface thereof, a polyvinyl ether adhesive was applied at a rate of 35 to 40 g/m^2 (the amount of applied adhesive as measured when dried), whereby the dressing was manufactured. The overall thickness of this dressing was 60 μm, the METSUKE or weight-per-unit-area was 65 g/m^2, the mositure permeability was 840 g/m^2 or higher (measured by JIS.Z.0208), the water pressure resistance was 1000 mmH_2O or higher (JIS.L.1096 low pressure test), the water repellency was 50 or higher (measured by JIS.L.1096), the transparency was excellent, and the surface filth wiping-off ability was also good, but the operability or maneuverability was very bad. Thus, this dressing was not satisfactorily usable as such.

(Effects of the Invention)

In the dressing according to the present invention, the plactics film, the nonwoven fabric and adhesive layer are all transparent, so that the user can accurately apply the dressing to a predetermined position, seeing the skin surface through the plastics film and the nonwoven fabric and, furthermore, he can see the state of the skin surface with the dressing stuck thereto at any time; and therefore, it becomes possible to take an optimum therapeutical measure, and, since the plastics film is shape-retainably supported

by the nonwoven fabric, the manipulation of the dressing can be performed very easily.

According to the present invention, the nonwoven fabric and the plastics film are both flexible, and therefore, the dressing can follow the movement of the skin, so that the dressing is always held in close contact with the skin, and since the nonwoven fabric is embossed, the capillarity in the side faces of the dressing is suppressed, so that the infiltration of water, germs, etc. from around said side faces can be prevented; and, if a thermoplastic nonwoven fabric is used as said nonwoven fabric, the water absorption is very much lowered, and thus, the water resistance is enhanced. Furthermore, since the surface of the dressing is constituted by a plastics film, it is ensured that, in a case where a filth sticks to the dressing when it is used in a hospital or the like, such filth can be easily wiped off.

BRIEF DESCRIPTION OF THE DRAWINGS:

Fig.1 is a sectional view showing an embodiment of the present invention, Fig.2 is a sectional view showing a further embodiment of the present invention, Fig.3 is a schematic diagram explaining examples of the embossing pattern, and Fig.4 shows schematic diagrams explaining the process of manufacturing the dressing according to the present invention.

1 ... Plastics film, 2 ... Nonwoven fabric, 4 ... Adhesive layer 5 ... Embossed portions.

CLAIMS

1. A dressing comprising a light-transmissive adhesive layer and a light-transmissive, flexible plastics film, which film is laminated on one side to a non-woven fabric layer, wherein the non-woven fabric layer is provided with a pattern of protrusions on one surface which allows part of the patterned non-woven fabric layer to be light-transmissive.

2. A dressing according to claim 1, wherein the adhesive layer is provided on the flexible plastics film.

3. A dressing according to claim 1, wherein the adhesive layer is provided on the non-woven fabric layer.

4. A dressing according to any preceding claim, wherein, with respect to the total area of the surface of the non-woven layer on which the pattern of protrusions is provided, the percentage area taken up by the protrusions is 20 to 70%.

5. A dressing according to any preceding claim, wherein the protrusions are square, triangular, circular or oval in cross-sectional shape.

6. A dressing according to any preceding claim, wherein the pattern consists or rows of protrusions.

7. Dressing characterised in that a nonwoven fabric and a light-transmissive, flexible plastics film are laminated, wherein at least said nonwoven fabric is embossed, and a light-transmissive adhesive layer is provided on the whole surface at the side of said plastics film opposite with respect to its side adjacent the nonwoven fabrics.

8. Dressing characterised in that a nonwoven fabric and a light-transmissive, flexible plastics film are laminated, wherein at least said nonwoven fibre is embossed, and a light transmissive adhesive layer is provided on the whole surface at the side of said

nonwoven fabric opposite with respect to its side adjacent said plastic film.

9. A dressing substantially as hereinbefore described with reference to and as illustrated in Figure 1; Figure 2; Figure 3a; Figure 3b; Figure 3c or Figure 3d.

Patents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search Report)

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Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASES: WPI, CLAIMS

Date of Search
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Documents considered relevant following a search in respect of claims 1 TO 9

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
	NONE	

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Category	Identity of ment and relevant passages	Relevant to claim(s)

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